



# Satellite Map of Tragedy

## Remains, belongings plotted at WTC site

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**U**sing global positioning technology, the Fire Department has created a detailed and gruesome index of exactly where nearly 4,000 body parts, personal belongings and pieces of firefighting equipment have been found at Ground Zero.

The location of virtually every item recovered — from the largest fire truck to a blood-stained wallet and the smallest pieces of a scalp — have been mapped on a grid of the 16-acre disaster site.



POOL

"It's the only record of where people were found," said Battalion Chief Joseph Pfeifer, who was the first chief on the scene Sept. 11 and oversees the mapping operation. "It's a historical document."

**Global positioning technology captured much more detail than this aerial photo taken on September 15, 2001.**

The data is expected to be used for law enforcement and engineering investigations, identification by the medical examiner's office and for families who want to know where their loved ones were found.

The mapping process is carried out by a special unit of firefighters, equipped with a hand-held computer device, who are called in each time bodies or equipment are found.

The items are numbered, tagged and then keyed into a computer by category, such as "bunker gear," "fire apparatus" or "human remains."

### Satellite Coordinates

With the global positioning device, the firefighters bounce a signal off three satellites, which pinpoint the exact location of the item on the site map broken down into 75-by-75-foot grids.

The department's mapping experts, known as the Phoenix Unit, started using global positioning technology to map body parts and other discoveries about three weeks into the disaster.

"We went from hand-scratched notes to GPS," Pfeifer said. "We were creating this as we went along."

"The goal is to eventually put a database together with names and locations. It's not complete," he said.

Pfeifer, who lost his brother, Lt. Kevin Pfeifer, in the collapse, and other fire officials know the importance of such information to victims' families.

"Some relatives want to know. The department wants to know" the exact location of human and other remains, said FDNY Deputy Commissioner Frank Gribbon. "We get questions like, 'If a shoe was found on West St., was it from my loved one?' There are all kinds of questions we want to be able to answer."

"The GPS data is very accurate," he said. It can pinpoint locations "within a 3-foot-by-6-foot area."

### Chilling Portrait

The existing computer database, a copy of which the department released to the Daily News, provides a unique glimpse of the remains found at Ground Zero.

An 89-page printout of the items found at the site paints a chilling portrait of the devastation and horrific loss of life at the scene.

The catalogue includes a wide range of firefighting equipment, clothing, personal items and human body parts.

Relatively mundane finds such as a hydrant wrench, a search rope or a pair of blue firefighter gloves were plotted in the same meticulous manner as "remains of skull found in helmet" on Sept. 21, or "leg muscle and bone" found Oct. 1.

The map shows a concentration of victims, as might be expected, near the bases of the twin towers. But some remains were widely scattered.

As of last week, 17,233 body parts had been recovered and 808 victims positively identified by the medical examiners. The discrepancy in the number of body fragments is the result of the medical examiner's more detailed tagging and ID system.

Once the database is completed and the Fire Department matches its information with identifications by the medical examiner's office, the combined data will be made available to victims' family members.

That could be months away.

"It will show who was in what tower by the location of where they were found. I think it will be valuable," Pfeifer said.